# NiteDevil HD-SDI Cameras

Stunning **1080p HD-SDI** cameras with built in **NiteDevil™** technology.

**Anti-Vandal**
CAM320

**Traditional**
CAM341-344

**Covert**
CAM350-351

**Mini Bullet**
CAM360-362

**All-In-On IR**
CAM380

**Handbook & Instructions**

Manual Ref: XND-HD-02

Nite Devil™ HD


**CAM380** - 2.1 Megapixel All-In-One IR with a 2.8 - 11mm lens.

## Introduction

**The ever impressive NiteDevil technology is now built into a wide range of our HD-SDI cameras.**

Our incredible 2.1 megapixel HD-SDI cameras record 1080p broadcast quality images at 25fps, that's 20x the quality of the average analogue alternative. Connect these cameras to one of our HD-SDI DVRs and you'll have an unrivalled CCTV system.

We offer a variety of HD-SDI cameras to suit any environment, from tiny module cameras and mini bullets to external all-in-one IR cameras.

As well as new systems, our HD-SDI cameras and alien DVRs offer a potential upgrade opportunity as they are designed to work over co-ax. By using co-ax cable already installed for an old analogue system it's easy to make the transition to HD-SDI.

# Contents

# CAM320 - Anti Vandal HD-SDI Dome

Available with wall bracket

## Features

- 1080p at 25fps
- Low light 0.02 Lux (Sens-up)
- Dual Voltage, 12V DC, 24V AC
- Digital 64x Zoom
- Privacy Masking
- Wide Dynamic Range
- Internal Wiring

With its 1080p high-res image quality, this camera outputs the same stunning images as you would get from an HD TV programme. Additional NiteDevil technology gives it great low light performance.

| FUNCTION | SPECIFICATION |
|---|---|
| Imaging Sensor | 1/3" 2.1M Megapixel CMOS |
| Resolution | 1080p 25fps |
| Lens Type | 2.8 - 11mm Vari-focal |
| Min. Illumination | 0.02 Lux (Sens-up) |
| Input Voltage | 12V DC/24V AC (Dual Voltage) |
| Current Consumption | 150mA (12VDC) / 120mA ( 24VDC) |

| FUNCTION | SPECIFICATION |
|---|---|
| SN Ratio | More than 50dB |
| IP Rating | IP66 |
| Gain Control | Automatic |
| Video Connection | HD-SDI BNC Socket |
| Power Connection | Terminal Strip |
| Dimensions | 144mm Dia x 100.5mm |

# CAM320 - Inside The Camera

OSD Menu & Settings Guide Starts On Page 20

### 1 Focus Adjustment
Adjust the focus after adjusting the zoom to get the perfect picture.

### 2 HD-SDI Video Out
Internal BNC connection means all your wiring remains inside the dome.

### 3 Joystick
Use the joystick to navigate the camera's OSD menu.

### 4 Test Output
This handy Composite Video Output means you don't even need to come down the ladder to test your setup!

### 5 Zoom Adjustment
Adjust the zoom in/out of the camera by unlocking this screw.

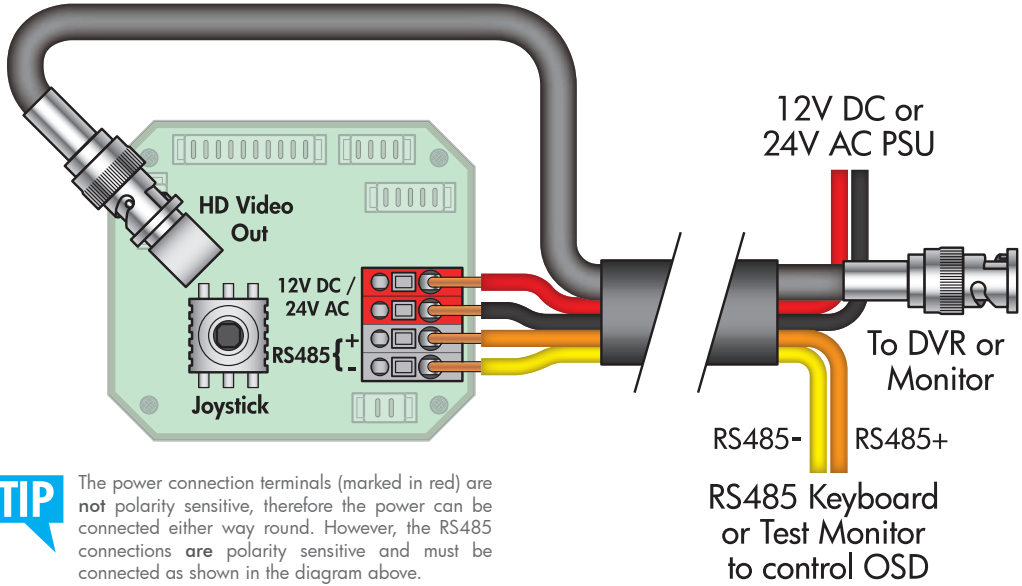
### 6 Tilt Axis
Unlock the side screws to tilt the camera up and down.

### 7 Rotational Axis
Turn this to rotate the camera's output image so that it is correct on the monitor.

### 8 Left-Right Axis
Simply unlock these screws to adjust the left-right orientation of the camera.

### 9 Connection Block
Spring lock connections for easy wiring. **All** wiring can be done inside the dome.

# CAM320 - Connecting The Camera Using RG59+4 (PTZ Combo Cable)



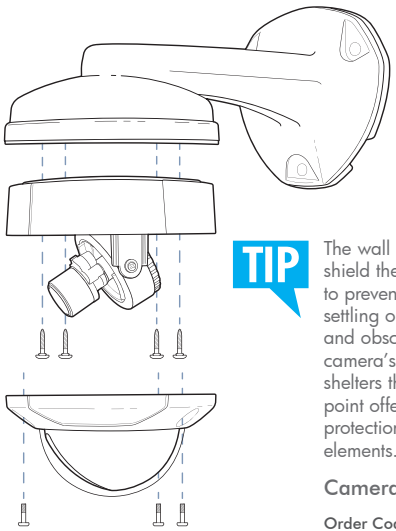

TIP

The power connection terminals (marked in red) are **not** polarity sensitive, therefore the power can be connected either way round. However, the RS485 connections **are** polarity sensitive and must be connected as shown in the diagram above.

# CAM320 - Mounting The Camera

OSD Menu & Settings Guide Starts On Page 20

The camera can be mounted on a wall, ceiling or attached to an optional wall bracket.



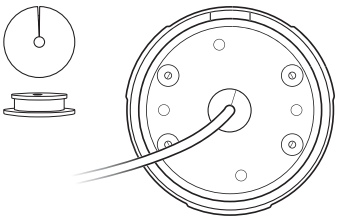
**TIP**

The wall bracket helps shield the camera to prevent rain from settling on the dome and obscuring the camera's vision. It also shelters the cable entry point offering better protection against the elements.

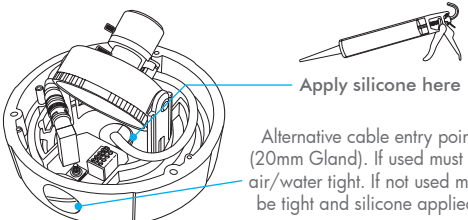
Camera & Bracket

Order Code: CAM325

To ensure that the camera is weatherproof, a rubber grommet is provided through which the cable enters the camera.



Prior to the end of the installation you need to additionally seal the grommet with a flexible silicone product. This is because the rubber grommet may shrink or get stressed over time.



# CAM341-344 - Traditional HD-SDI Camera


MiRs
Maximum IR Sensitivity

## Features

- 1080p at 25fps
- True Day-Night
- Wide Dynamic Range
- Choice of 12V, Dual Voltage or 240V
- 0.02 Lux (Sens-up)
- Mirror / Privacy Function
- Motion Detection

A stylish high performance NiteDevil camera in a traditional style features Wide Dynamic Range and OSD Menu for mirror, privacy & motion detect functions. This true day-night camera has a mechanical IR filter for superb nigh-time surveillance.

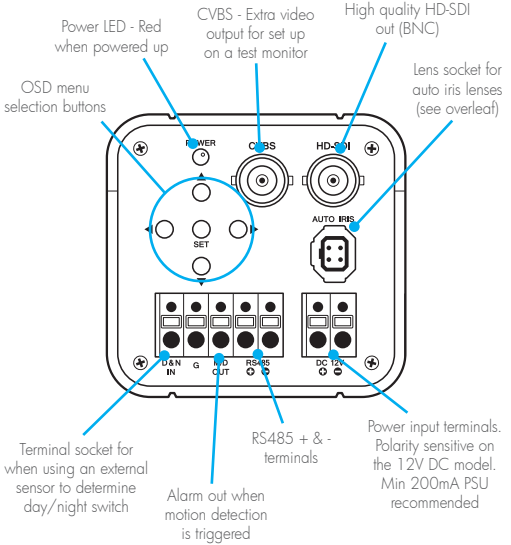
| FUNCTION | SPECIFICATION |
|---|---|
| Imaging Sensor | 1/3" 2.1 Megapixel |
| Resolution | 1080p 25fps |
| Lens Type | 2.8 - 12mm Option Available |
| Min. Illumination | 0.02 Lux (Sens-up) |
| Input Voltage | 12V DC / 24V AC / 240V AC |

| FUNCTION | SPECIFICATION |
|---|---|
| Current Consumption | 150mA |
| SN Ratio | More than 50dB |
| Video Connection | HD-SDI BNC Socket |
| Power Connection | Terminal Strip |
| Dimensions | 65mm x 60mm x 119.6mm (ex Lens) |

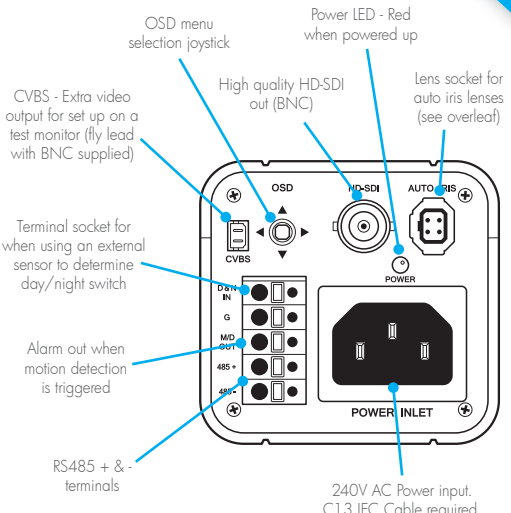
# CAM341-344 - Connecting The Camera

OSD Menu & Settings Guide Starts On Page 20

## CAM341 12V DC & CAM343 Dual Voltage



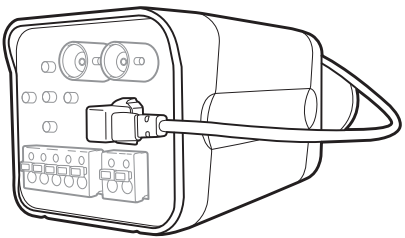

## CAM345 - 240V AC

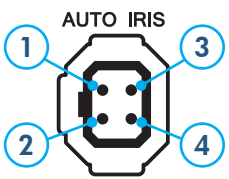


# CAM341-344 - Fitting The Camera Lens

## Auto-Iris Direct Drive Connections

Auto Iris type lenses require the 4-pin connector to be attached to the camera. In most instances your lens will be pre-wired with this plug, but if needed on-line Tip 322 which includes a full wiring diagram can be found at www.nitedevil.com.






1. DAMPING-
2. DAMPING+
3. DRIVE
4. GND

## C Or CS Mount Lenses

Most lenses are available in 2 different mounting options - C mount and CS mount.

CS mount lenses are now the most popular size as they are shorter and more compact than C mount lenses. Most cameras are now manufactured to accept CS mount lenses. Before fitting the lens you need to verify that you are using a CS mount lens with the camera. You can confirm this with your lens supplier or the literature that came with your lens, check the instructions or packaging to see if your lens is a C or a CS mount version.

If your lens is a C mount type you can still fit it to the camera. Please see the on-line Tip 323 at www.nitedevil.com.

## Using A CS Mount Lens

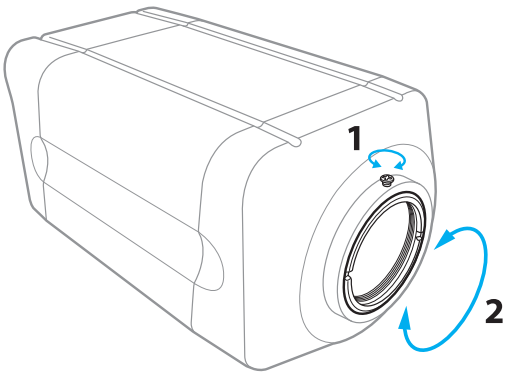
If you are using a standard CS mount lens you can screw the lens straight into the camera without the need for the C-CS adapter ring (supplied).

# CAM341-344 - Fitting The Camera Lens

OSD Menu & Settings Guide Starts On Page 20

## Adjusting The Inner Focus Ring

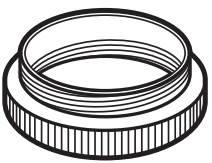
Once you have fitted the lens, if you have a picture on the monitor but cannot correctly focus the lens by the fine focal adjust on the lens itself, you may need to alter the inner adjusting ring that is screwed into the end of the camera. This ring enables the lens to either "sit" a little closer or a little further away from the camera to get a sharp focused image when using lenses from different manufacturers.




To adjust the inner focus ring you will need to first remove the lens. Next loosen the small cross-head screw which in turn loosens the inner focus ring as shown.

This is a trial and error process by moving the ring in or out say by ½ turn then locking it again, re-attaching the lens and trying to refocus. It is possible (with common sense!) to work out whether the lens needs to be nearer or further away from the camera by watching for improvements in focus at each attempt.

NOTE If it appears that the lens will never be in focus then it is possible that you are trying to fit a **C-mount** lens on the camera, not a **CS-mount** lens. If this is the case you will have to add the adapter ring to the lens that was provided free with the camera. The adapter ring looks like this:



C-mount to CS-mount adapter ring supplied

# CAM350/351 - Covert HD-SDI Modules


**CAM350**
Board Lens Camera


**CAM351**
Pinhole Camera

## Features

- 1080p at 25fps
- Low light 0.02 Lux (Sens-up)
- Motion Detect
- Privacy Masking
- Just 35.5mm Wide
- Wide Dynamic Range
- Mounting Bracket Included

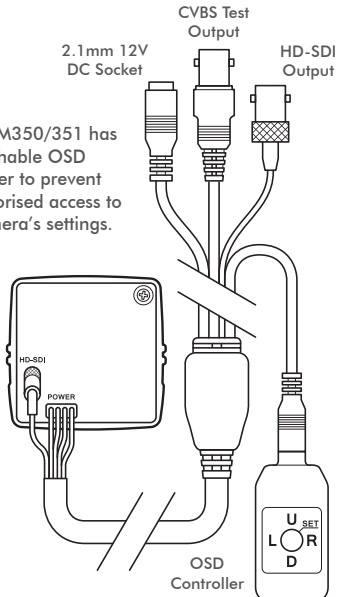
NiteDevil HD-SDI covert camera module with on screen display for mirror, privacy & motion detect functions. The light sensitivity of the NiteDevil is so good that it can retain a colour picture in very low light conditions making it ideal for dark and low light applications. (FREE fixing bracket)

| FUNCTION | SPECIFICATION |
|---|---|
| Imaging Sensor | 1/3" 2.1 Megapixel |
| Resolution | 1080p 25fps |
| Lens Type | 3.7mm Board / 4.5mm Pinhole |
| Min. Illumination | 0.02 Lux (Sens-up) |
| Input Voltage | 12V DC |

| FUNCTION | SPECIFICATION |
|---|---|
| Current Consumption | 150mA |
| SN Ratio | More than 50dB |
| Video Connection | HD-SDI BNC Socket (Moulded) |
| Power Connection | 2.1mm 12V DC Socket (Moulded) |
| Dimensions | 38 x 35.5mm |

# CAM350/351 - Connecting & Mounting

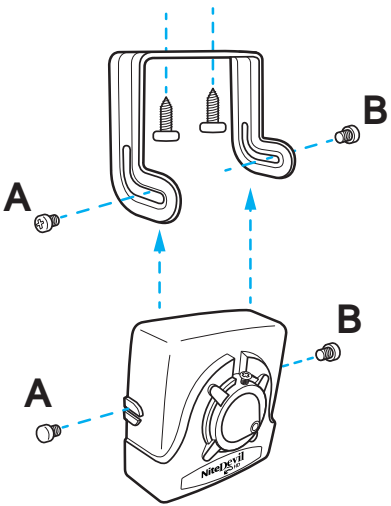
OSD Menu & Settings Guide Starts On Page 20




**TIP**

The CAM350/351 has a detachable OSD controller to prevent unauthorised access to the camera's settings.

The CAM350/351 is supplied with a free mounting bracket that can be easily fixed to virtually any surface.



# CAM360/362 - Mini HD-SDI Bullets

**CAM360**
External Bullet With
3.7mm Board Lens

**CAM362**
Internal Bullet With
4.5mm Pinhole Lens

## Features

- 1080p at 25fps
- Low light 0.02 Lux (Sens-up)
- Digital 64x Zoom
- Choice Of Lenses
- Privacy Masking
- Wide Dynamic Range
- Removable Sun Shield
- Anti Vandal
- Bracket Included

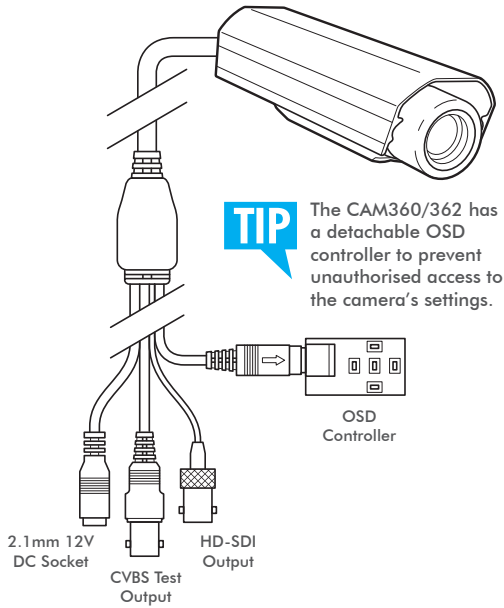
The NiteDevil HD-SDI mini bullet cameras are a great option when broadcast quality pictures are desired in discreet or covert applications. Ideal for tight spaces measuring less than 12cm.

| FUNCTION | SPECIFICATION |
|---|---|
| Imaging Sensor | 1/3" 2.1 Megapixel |
| Resolution | 1080p 25fps |
| Lens Type | 3.7mm Board / 4.5mm Pinhole |
| Min. Illumination | 0.02 Lux (Sens-up) |
| Input Voltage | 12V DC |
| Current Consumption | 150mA |

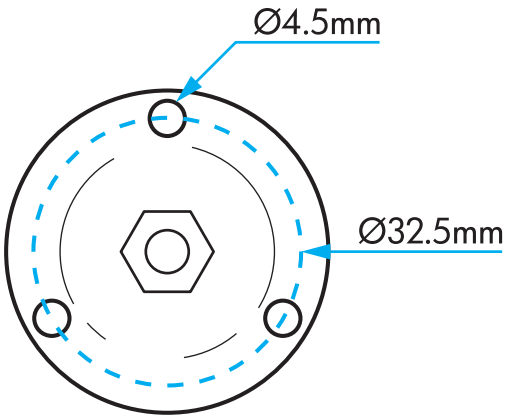
| FUNCTION | SPECIFICATION |
|---|---|
| SN Ratio | More than 50dB |
| Video Connection | HD-SDI BNC Socket (Moulded) |
| Power Connection | 2.1mm 12V DC Socket (Moulded) |
| IP Rating | IP66 (CAM360 Only) |
| Mounting Bracket | Supplied |
| Dimensions | 35mm x 125mm (Including Sun-shield) |

# CAM360/362 - Connecting & Mounting

OSD Menu & Settings Guide Starts On Page 20




The CAM360/362 is supplied with a free mounting bracket. A fixing hole diagram is shown below to help when fitting the camera bracket.



# CAM380 - External HD-SDI All-In-One IR Camera

**CAM380W**
Polar White

**CAM380G**
Graphite Grey

## Features

- 1080p at 25fps
- 2.8 - 11mm Vari-focal Lens
- Built-In IR LEDs
- True Day Night
- True Wide Dynamic Range
- 62 x Digital Zoom PIP
- Dual Voltage, 12V DC, 24V AC

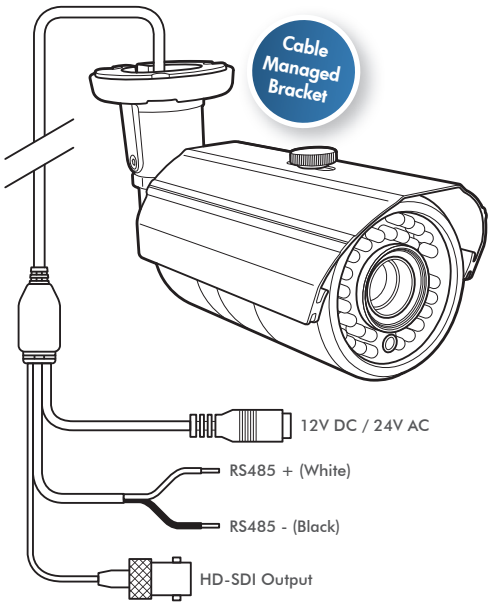
If you had any doubts over which model of HD-SDI camera to install then this is a winning choice! The CAM380 has all the low light surveillance benefits of NiteDevil technology and a Wide Dynamic Range with the added functionality of 40 IR LEDs.

| FUNCTION | SPECIFICATION |
|---|---|
| Imaging Sensor | 1/3" 2.1M Panasonic Megapixel CMOS |
| Resolution | 1080p 25fps |
| Lens Type | 2.8 - 11mm Vari-focal |
| Min. Illumination | 0 Lux (IRs On) |
| Input Voltage | 12V DC/24V AC (Dual Voltage) |
| Current Consumption | 170mA IR Off / 300mA IR On |

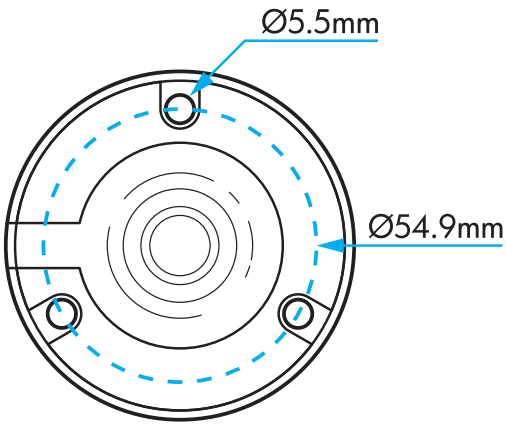
| FUNCTION | SPECIFICATION |
|---|---|
| SN Ratio | More than 50dB |
| IP Rating | IP66 |
| Gain Control | Automatic |
| Video Connection | HD-SDI BNC Socket |
| Power Connection | 2.1mm Socket |
| Dimensions | 78mm Dia x 140mm (Ex Sun-shield) |

# CAM380 - Connecting & Mounting

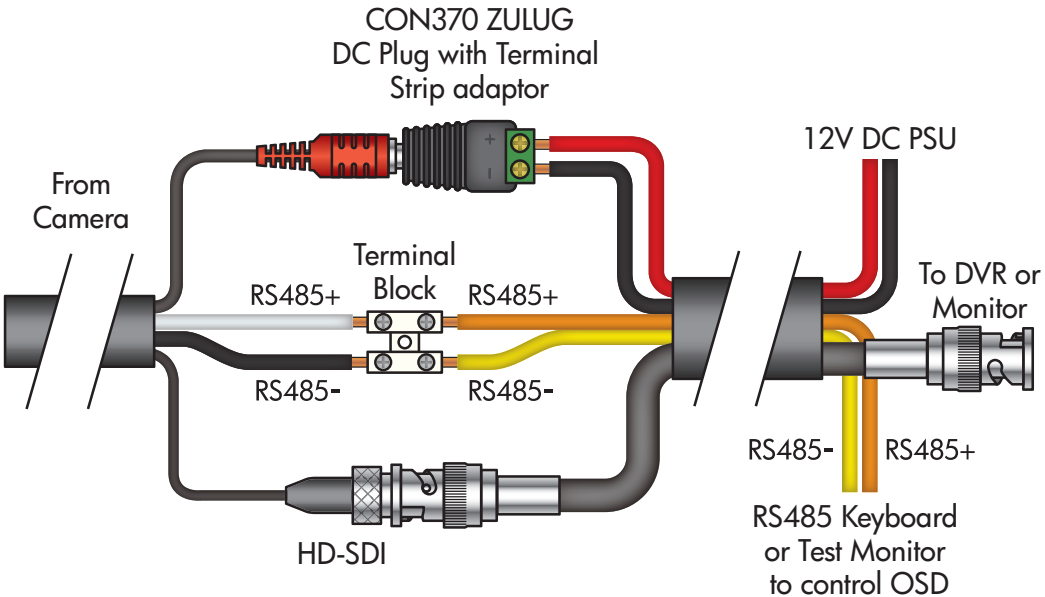
OSD Menu & Settings Guide Starts On Page 20




The CAM380 comes fitted with an adjustable cable managed bracket. Below is a diagram to help when mounting the camera.



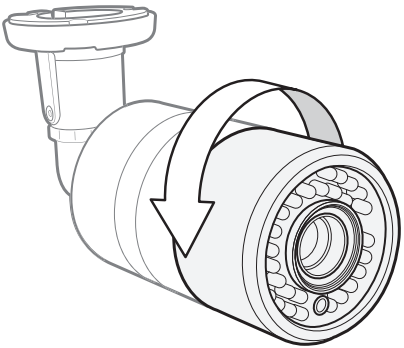
# CAM380 - Connecting The Camera Using RG59+4 (PTZ Combo Cable)



# CAM380 - Camera Adjustments

OSD Menu & Settings Guide Starts On Page 20

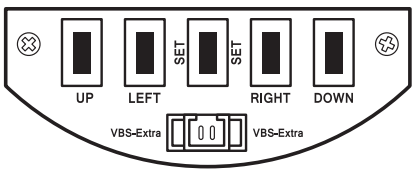
The CAM380's menu controls, zoom and focus adjustments and CVBS test output are all cleverly hidden away inside the camera. To access these features simply unscrew the front end of the camera to reveal the lens and PCB.



**TIP** When screwing the front back onto camera, make sure the seal is as tight as possible to prevent moisture entering the camera.

Once the front end of the camera has been removed you are then able to adjust the camera's lens and menu settings.

Behind the IR LEDs you will see the menu control buttons and test output as shown below. A flylead is supplied with the camera for connecting the camera to a test monitor.




Tables showing the CAM380's menu structure and options available can be found on **pages 21 - 27**.

**TIP** If installed on a damp or humid day ensure you wipe the inside of the camera with a dry, lint free cloth to avoid any moisture being trapped inside.

OSD Menu Guide Starts Here!

# Accessing The Menus

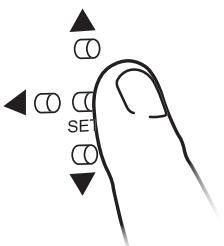
To make life easier, all the HD-SDI cameras covered in this book have virtually the same simple menu system.

You can access the menus in the camera in two ways:

1. **Menu control buttons on the rear of the camera or OSD menu controller.**
2. **RS485 control using a keyboard, DVR, or CCTVMate test monitor.** (CAM320, CAM341-344 & CAM380)

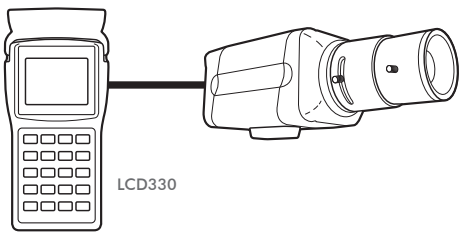
## Menu Control Buttons

To access the menus using the Menu control buttons or OSD menu controller, simply press the SET button down and the menu will pop up on the camera's image. Use the arrow keys to navigate through the menus. Selection is made by pressing the set button.




## RS485

The CAM320 and the CAM341-344 range also has traditional RS485 PELCO-D control and has terminals to connect the RS485 control device to. PTZ keyboards, some DVRs or the CCTVMate test monitor all have RS485 control outputs that can control the camera. This method can be useful to adjust cameras remotely that are connected to DVRs.




TIP **When using a test monitor you must use the CVBS test output unless the test monitor specifies it is HD-SDI compatible.**

# Main Menu

## Menu Structure

The following table shows the menu structure of the HD-SDI cameras covered in this book. Although all the cameras have an almost identical menu system, a few options may not be available on every camera.

## CAM350/351 & CAM380

The menu structure for theses models differs slightly from the other cameras covered in this book. Menu options unique to these cameras will be identified with the CAM350 icon shown to the right.

| MAIN MENU | SUB MENU | OPTION | | |
|---|---|---|---|---|
| LENS | | | DC / VIDEO / MANUAL | |
| | | DC: | 1. MODE: INDOOR / OUTDOOR | 2. RETURN: RET / END |
| EXPOSURE | SHUTTER | | AUTO / MANUAL / FLK | |
| | | MANUAL: | 1. LEVEL: 1/25 ~ 1/50000 / x2 ~ x60 | 2. RETURN: RET / END |
| | AGC | | LOW / MIDDLE / HIGH | |
| | AGC  | | 0 ~ 15 | |
| | SENS-UP | | AUTO / OFF | |
| | | AUTO: | 1. SENS-UP: x2 ~ x60 | 2. RETURN: RET / END |
| | BRIGHTNESS | | 1 ~ 100 | |
| | D-WDR / ACCE | | OFF / LOW / MIDDLE / HIGH | |
| | D-WDR  | | ON / OFF | |
| | DEFOG | | OFF / LOW / MIDDLE / HIGH | |

| MAIN MENU | SUB MENU | OPTION | | |
|---|---|---|---|---|
| EXPOSURE (CONTINUED) | DEFOG | | ON / OFF | |
| | | ON: | 1. POS / SIZE: POSITION → SIZE → RET / AGAIN<br>2. GRADUATION: OFF / LOW / MIDDLE / HIGH | 3. DEFAULT<br>4. RETURN: RET / END |
| | BACKLIGHT | | OFF / BLC / HSBLC | |
| | | BLC: | 1. GAIN: LOW / MIDDLE / HIGH<br>2. AREA: POSITION → SIZE → RET / AGAIN | 3. DEFAULT<br>4. RETURN: RET / END |
| | | HSBLC | 1. SELECT: AREA1 ~ 4<br>2. DISPLAY: ON / OFF<br>ON: POSITION → SIZE → RET / AGAIN<br>3. LEVEL: 0 ~ 100 | 4. MODE: ALL DAY / NIGHT<br>5. BLACK MASK: ON / OFF<br>6. DEFAULT<br>7. RETURN: RET / END |
| BACKLIGHT | | | OFF / WDR / BLC / HSBLC (FOR HSBLC SEE ABOVE) | |
| | | WDR: | 1. GAIN: LOW / MIDDLE / HIGH<br>2. WDR OFFSET: 0 ~ 255 | 3. RETURN: RET / END<br>(NOT SUPPORTED ON CVBS) |
| | | BLC: | 1. GAIN: LOW / MIDDLE / HIGH<br>2. AREA: POSITION → SIZE → RET / AGAIN | 3. DEFAULT<br>4. RETURN: RET / END |
| WHITE BAL | | | ATW / AWC →SET / INDOOR / OUTDOOR / MANUAL | |
| | | MANUAL: | 1. BLUE: 0 ~ 100<br>2. RED: 0 ~ 100 | 3. RETURN: RET / END |
| DAY & NIGHT | | | AUTO / COLOUR / B&W / EXT | |
| | | AUTO: | 1. DELAY: 0 ~ 60<br>2. D → N (AGC): 0 ~ 100 | 3. N → D (AGC): 0 ~ 100<br>4. RETURN: RET / END |

# Main Menu Continued

 - Options with this icon relate to the CAM350/351 & CAM380 Only

| MAIN MENU | SUB MENU | OPTION | | |
|---|---|---|---|---|
| DAY & NIGHT (CONTINUED) | | B&W: | 1. BURST: ON / OFF<br>2. IR SMART: ON / OFF<br>ON: 1. LEVEL: 0 ~ 16<br>2. AREA: POSITION → SIZE → RET / AGAIN<br>3. RETURN: RET / END | 3. IR LED: ON / OFF<br>4. IR PWM: 0 ~ 100<br>5. RETURN: RET / END |
| |  | EXT: | 1. DELAY: 0 ~ 20<br>2. EXT ACTIVE: LOW / HIGH<br>3. RETURN: RET / END | |
| NR | 2DNR | | ON / OFF | |
| | 3DNR | | ON / OFF | |
| | | ON: | 1. S-LEVEL: 0 ~ 100<br>2. E-LEVEL: 0 ~ 100 | 3. RETURN: RET / END |
| | 3DNR  | | ON / OFF | |
| | | ON: | 1. SMART NR: ON / OFF<br>ON: 1. SENSITIVITY: 0 ~ 100<br>2. RETURN: RET / END<br>2. LEVEL: 0 ~ 100 | 3. START.AGC: 0 ~ 100<br>4. END.AGC: 0 ~ 100<br>5. RETURN: RET / END |
| | LEVEL | | 0 ~ 100 | |
| | SMART NR | | ON / OFF | |
| SPECIAL | SEE PAGE 15 | | | |
| ADJUST | SHARPNESS | | 1. SHARPNESS: ON / OFF<br>2. LEVEL: 0 ~ 100 | 3. RESOLUTION: ON / OFF<br>4. RETURN: RET / END |

# Main Menu Continued

 - Options with this icon relate to the CAM350/351 & CAM380 Only

| MAIN MENU | SUB MENU | OPTION | | |
|---|---|---|---|---|
| ADJUST (CONTINUED) | MONITOR | | LCD / CRT | |
| | | LCD: | 1. GAMMA: AUTO / USER1 / USER2 / 0.45 ~ 1<br>2. BLUE GAIN: 0 ~ 100 | 3. RED GAIN: 0 ~ 100<br>4. RETURN: RET / END |
| | | CRT: | 1. BLACK LEVEL: -30 ~ +30<br>2. BLUE GAIN: 0 ~ 100 | 3. RED GAIN: 0 ~ 100<br>4. RETURN: RET / END |
| | OSD | | 1. TEXT COLOUR: 1 ~ 8<br>2. OUTLINE: ON / OFF | 3. RETURN: RET / END |
| | LSC | | ON / OFF | |
| | NTSC/PAL | | NTSC / PAL | |
| ADJUST  | | | 1. SHARPNESS: 0 ~ 15<br>2. MONITOR: LCD / CRT<br>LCD: 1. GAMMA: USER / USER+Y / 0.45 ~ 1 / AUTO<br>2. ADAPT LEVEL: 0 ~ 100<br>3. BLUE GAIN: 0 ~ 100<br>4. RED GAIN: 0 ~ 100<br>5. RETURN: RET / END | CRT: 1. BLACK LEVEL: -30 ~ +30<br>2. BLUE GAIN: 0 ~ 100<br>3. RED GAIN: 0 ~ 100<br>4. RETURN: RET / END<br>3. LSC: ON / OFF<br>ON: 1. SCAN<br>2. RETURN: RET / END<br>4. VIDEO OUT: PAL / NTSC<br>5. RETURN: RET / END |
| RESET | | | 1. FACTORY | 2. RETURN: RET / END |
| RESET  | | | FACTORY / CHANGE | |
| | | FACTORY: | RESTORE DEFAULT SETTINGS | |
| | | CHANGE: | SAVE CURRENT SETTINGS AS DEFAULT SETTINGS | |
| EXIT | | | SAVE & EXIT | |

# Special Menu

## Special Sub Menu

The following table shows the '**Special**' sub menu structure. Although all the cameras have an almost identical menu system, a few options may not be available on every camera.

## CAM350/351 & CAM380

The menu structure for theses models differs slightly from the other cameras covered in this book. Menu options unique to these cameras will be identified with the CAM350 icon shown to the right.

| SPECIAL MENU | SUB MENU | OPTION | | |
|---|---|---|---|---|
| CAM TITLE | | | ON / OFF | |
| | | ON: | INPUT CAMERA NAME | |
| D-EFFECT | FREEZE | | ON / OFF | |
| | MIRROR | | OFF / MIRROR / V-FLIP / ROTATE | |
| | D-ZOOM | | ON / OFF | |
| | | ON: | 1. PIP: ON / OFF<br>2. D-ZOOM: x2 ~ x64<br>3. PAN&TILT: PIP → D-ZOOM | 4. DEFAULT<br>5. RETURN: RET / END |
| | SMART D-ZOOM  | | 1. SELECT: AREA1 ~ 2<br>2. DISPLAY: ON / OFF<br>ON: POSITION<br>3. SENSITIVITY: 0 ~60 | 4. D-ZOOM: x2 ~ x62<br>5. TIME: 0 ~ 15<br>6. DEFAULT<br>7. RETURN: RET / END |
| | NEG IMAGE | | ON / OFF | |
| | DIS  | | NOT SUPPORTED | |

| SPECIAL MENU | SUB MENU | OPTION |
|---|---|---|
| MOTION | | ON / OFF |
| | | ON: 1. SELECT: AREA1 ~ 3<br>2. DISPLAY: POSITION → SIZE → RET / AGAIN<br>3. SENSITIVITY: 0 ~ 60<br>4. MOTION VIEW: ON / OFF<br>5. DEFAULT<br>6. RETURN: RET / END |
| PRIVACY | | ON / OFF |
| | | ON: 1. SELECT: AREA1 ~ 8<br>2. DISPLAY: ON / OFF<br>ON: POSITION → SIZE → RET / AGAIN<br>3. COLOUR: 1 ~ 16<br>4. DEFAULT<br>5. RETURN: RET / END |
| PRIVACY | | 1. SELECT: AREAR1 ~ 8<br>2. DISPLAY: INV / MOSAIC / COLOUR / OFF<br>INV: POSITION → TOP LEFT → TOP RIGHT → BOTTOM LEFT → BOTTOM RIGHT → RET / AGAIN<br>MOSAIC: POSITION → TOP LEFT → TOP RIGHT → BOTTOM LEFT → BOTTOM RIGHT → RET / AGAIN<br>COLOUR: POSITION → TOP LEFT → TOP RIGHT → BOTTOM LEFT → BOTTOM RIGHT → RET / AGAIN<br>3. COLOUR: 0 ~ 16<br>4. TRANS: 0 ~ 3<br>5. DEFAULT<br>6. RETURN: RET / END |
| LANGUAGE | | ENG / JPN / CHN1 / CHN2 |
| LANGUAGE | | ENG / JPN / CHN1 / CHN2 / KOR / GER / FRA / ITA / SPA / POL / RUS / POR / NED / TUR / HEB / ARB |

# Special Menu Continued

- Options with this icon relate to the CAM350/351 & CAM380 Only

| SPECIAL MENU | SUB MENU | OPTION | | |
|---|---|---|---|---|
| DEFECT | | | 1. LIVE DPC: ON / OFF / AUTO<br>2. LEVEL: 0 ~ 60<br>3. STATIC DPC: ON / OFF<br>4. START | 5. LEVEL: 0 ~ 60<br>6. SENS-UP: x2 ~ x60<br>7. RETURN: RET / END |
| DEFECT | LIVE DPC | | ON / OFF / AUTO | |
| | | ON: | 1. LEVEL: 0 ~ 100 | 2. RETURN: RET / END |
| | STATIC DPC | | ON / OFF | |
| | | ON: | 1. START<br>2. LEVEL: 0 ~ 60<br>3. SENS-UP: x2 ~ x30 | 4. AGC: 0 ~8<br>5. RETURN: RET / END |
| RS485 | | | 1. CAM ID: 0 ~ 255<br>2. ID DISPLAY: ON / OF<br>ON: POSITION | 3. BAUD RATE: 2400 / 4800 / 9600 / 19200 / 38400<br>4. RETURN: RET / END |
| VERSION | | | FIRMWARE VERSION | |
| RETURN | | | RET / END | |

**The NiteDevil HD-SDI range has a comprehensive menu system that allows you to set up the camera to get the most out of it in different demanding situations, below is a guide to some of the key functions:**

## Exposure

In the exposure settings you are able to adjust the shutter speed and sensitivity of the CCD to control how much light is collected by the camera. This allows you to configure the camera to achieve the best image possible based on the environment in which it is situated.

### Shutter

Controls how long the CCD is exposed to light. A slow shutter (opened for longer periods of time) makes the image brighter but any movement may appear blurred.

The shutter speed can be set to auto so that it automatically adjusts to changes in light levels producing bright images all the time. You can also manually set the shutter speed so that it is tailored to the environment in which it is installed.

### AGC (Automatic Gain Control)

AGC automatically adjusts the Video amplitude under various lighting conditions to maintain a bright image. You can choose the level of amplitude however setting it too high could produce a noisy image in low light conditions.

### Sens-Up

Sens-up technology makes the camera more sensitive to light giving better quality images in low light situations. You can set by how much the camera's sensitivity to light is intensified.

## Backlight

Generally there are 3 backlight modes, WDR (Wide Dynamic Range), BLC (Backlight Compensation) and HSBLC (High Suppression Backlight Compensation). All 3 modes are included on all camera models featured in this book. Each mode is designed to correct the brightness of the image in different environments as described below:

**WDR** Digitally adjusts the exposure in different parts of the image to maintain optimum levels in both the dark and the bright areas.

The strength of the WDR filter can be set to Low, Middle or High depending on the difference between the bright and dark areas of the image.

**BLC** Adjusts the exposure of the entire image to properly

expose a subject in the foreground when a bright light source, such as a window, is situated behind it.

You can choose the level of compensation for a bright background between Low, Middle and High as well setting the area of the camera's image for which to compensate.

**HSBLC** Masks areas of intense light to properly expose other areas of the image. For example a car's headlights would be masked reducing glare making the number plate visible.

When HSBLC is enabled the camera will automatically mask bright areas of the camera's image. Additionally you can manually set the size, position and strength of up to 4 masking areas.

## White Balance

White balance is configured so that objects appear a natural colour. There are various ways this can be achieved as explained below.

**ATW (Auto Tracking White Balance)**

The white balance is continuously adjusted according to the colour temperature of the image.

**AWC**

Automatically sets the white balance by holding a white object such as a piece of paper or card in-front of the camera and pressing set.

**Indoor**

Makes allowances for artificial light sources and adjusts the image's colour accordingly.

**Outdoor**

Makes allowances for natural light sources and adjusts the image's colour accordingly.

**Manual**

Allows you to manually fine tune the white balance of the image.

## Day & Night

In the day & night settings you can control if or when the camera switches between a colour and a black & white image.

NiteDevil technology can still produce a colour image in low light situations, however, in extremely low light situations

switching to a black & white image could produce a better quality image.

Auto

Auto is the most commonly used option. The camera will automatically switch to a black & white image when it detects light levels have dropped below a usable level.

A delay can be set of up to 60 seconds which will instruct the camera to wait for the set length of time before switching. This accommodates for any temporary drops in light such as passing clouds.

The gain can also be telling the camera to increase or decrease the video amplitude when switching from day to night and night to day.

Colour

The camera is forced to permanently produce a colour image. This is great in environments where there is constant light but could result in poor quality images in low light situations. As long as the camera is in colour mode the IR LEDs will not turn on.

B & W (Black & White)

The camera will permanently produce a black & white image. This is only recommended in areas where the light levels are always extremely low.

There are various settings to ensure the camera produces the best B & W image possible. Burst compensates for sudden changes in light levels. IR Smart closes the iris when a subject is close to the camera to darken the image and prevent over saturation. You also have the option to enable and disable the IR LEDs.

Ext (External) 

The switch between colour and black & white is controlled by an external trigger such as a photocell.

Again a delay can be set which will instruct the camera to wait for a set length of time before switching. This accommodates for any temporary drops in light

## Privacy

Allows the user to "block out" up to 8 areas in the picture so that the installation complies with the Data Protection Act and avoids infringing other people's privacy rights. This could be used to block out windows on a neighbouring property or screens and signs that display sensitive information.

## D-Zoom

Enables the user to digitally zoom in on an area of the image if the optical lens is not quite enough. PIP (Picture In Picture) can be enabled so that a small window showing the original size image is overlaid onto the screen when zoomed in.

## Smart D-Zoom

Allows the camera to be set up to "automatically" zoom in when it detects movement in a certain area. This can be used to get a closer view of faces or number plates.

The area, sensitivity and level of zoom can all be set.

Movement detected

Automatic Digital Zoom

## NR (Noise Reduction)

Noise reduction is the process of applying a filter to the image to reduce noise form the video signal. There are a number of NR options as explained below.

### Level

Is a basic filter to reduce small amounts of noise from the foreground of the image.

### 2DNR

Applies a digital filter to reduce noise from the foreground of the camera's image.

### 3DNR

Applies a digital filter to reduce noise from both the foreground and the background of the camera's image even in low light conditions.

Setting the level determines how strong a filter is applied and the sensitivity sets the tolerance as to what is considered noise.

### Smart NR

Enabled will reduce noise with very little loss of detail.

# Fault Finding

Every NiteDevil camera is built to the highest standards and is fully tested prior to packing so if you experience an installation problem you need to investigate your cabling, connections, power supply and monitor.

TIP See online Tip 259 for the '**Dos And Don'ts Of Power Supplies**' at nitedevil.com.

## No picture from the HD-SDI

There are a number of potential problems that could cause this.

**Step 1** The camera can not function without the correct power supply.

A. Test that the camera has the correct voltage supplying it, you must do this with the camera connected so that there is load on the PSU. A 12V DC camera should have at least 10.5V DC connected to it. 24V AC cameras should have at least 21.5V AC connected to them.

B. For 12V DC cameras only ever use regulated power supplies so that you can be sure that the camera is always receiving the correct voltage.

**Step 2** Check there is a picture coming out of the CVBS test output at the camera. If there is a picture here but not at the DVR it could be one of the following:

A. Video loss in composite cable as the run is too long. Usually you would get a picture up to around 100mtrs with HD-SDI. Anything above this would require a HD-SDI repeater (featured on page 35) every 100mtrs.

B. Check the quality of the cable used. For best results, especially with HD-SDI, use a cable with a solid copper core such as our antihum branded cable on page 37. Cable with a solid copper core suffers far less signal loss than cheaper, inferior cable which only has a copper coated core.

C. Ensure that the BNC - BNC lead that you connect between the camera and monitor has no shorts or open circuits. If you are making your own lead, don't forget the lead must have two wires connected to complete the circuit, Video and Ground.

D. Ensure all connections to both the camera and DVR are firm and secure.

E. Make sure that there are no tight bends or loops in the cable. The minimum bend radius for RG59 co-ax cable is 60mm.

TIP

See online Tip 300 for our '**Top Tips When Installing Cable**' and Tip 281 for the '**Dos And Don'ts For Running Co-ax**' at nitedevil.com.

## Test monitor doesn't display an image

Make sure the test monitor is connected to the camera's CVBS test output and not the HD-SDI output. A lot of test monitors do not accept HD-SDI signals.

## Can't control via 2 wire RS485

If your camera seems unresponsive when attempting to control it via RS485 check the following.

A. RS485 wires crossed over, try swapping around.

B. Wrong protocol and baud rate selected.

# 10 Reasons the alienHero HD DVR is great value for money

alienHero HD 8ch

1. **1080p Recording** *(broadcast quality)*
2. **Built-in Video Analytics** *(finds evidence instantly!)*
3. **High Definition HDMI Output** *(along with VGA)*
4. **Easy to Use Interface** *(said to be best in class)*
5. **AutoPort Plug-and-Play** *(for easy internet setup)*
6. **Compact Space Saving Case** *(slim modern design)*
7. **Free Dynamic DNS Setup** *(saves you time)*
8. **Full Alarm Inputs** *(8 on the 8 way) - (triggered how you want)*
9. **Bespoke Software Available** *(you want it, we write it)*
10. **Video Tagging** *(tag recording with keywords such as "theft")*

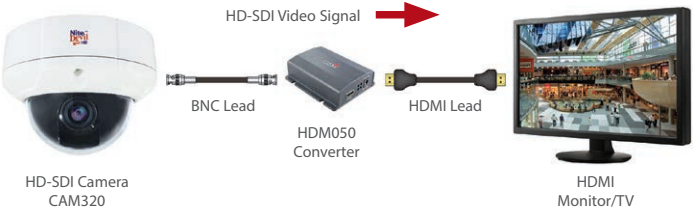
**Order Codes**

4ch 2TB: ALIEN674N

8ch 2TB: ALIEN678N

## HD-SDI to HDMI Converter

Order Code: HDM050




Ideal for converting the HD-SDI output of a camera into an HDMI output for direct connection into an HDMI monitor. This unit requires a minimum 180mA 12V DC power source.

## HD-SDI Repeater For Extra Long Cable Runs

Order Code: HDM100


This handy HD-SDI repeater unit helps extend cabling runs of HD-SDI products by boosting the HD signal to allow an additional 100M of cabling for each repeater. Multiple units can be used on one cable run up to a maximum of 4. Quick to install, these units have a standard BNC input and output and require a minimum 100mA 12V DC power source.

## HDMI Monitors

HDMI LED-backlit LCD monitor in a range of sizes with HDMI, VGA & DVI inputs.

22" Monitor: LCD822
24" Monitor: LCD824
27" Monitor: LCD827

## HDMI Leads

- High Quality CCTV Images
- 24k Gold Connections
- Range Of Sizes

Our HDMI leads have 24k gold connections for great image quality.

1m HDMI Lead: VID501
2m HDMI Lead: VID502
3m HDMI Lead: VID501
4m HDMI Lead: VID504
5m HDMI Lead: VID510

## HDMI Socket Adaptor

This adjustable HDMI socket adaptor is great for saving space on rack mount installations.

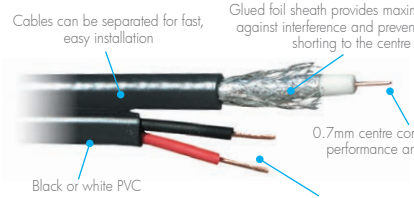
Order Code: VID500

## Megapixel Direct Drive Lenses

Megapixel direct drive lenses offer the lens quality needed to capture stunning HD images.

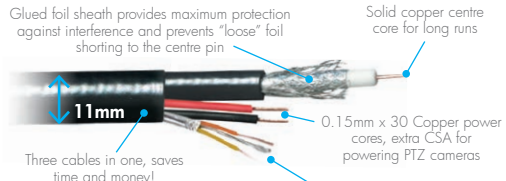
3.5-8mm DC Iris 1/3": MPL300
2.8-12mm DC Iris 1/3": MPL312
5-50mm DC Iris 1/3": MPL350

## Antihum RG59+2




**Black 100m Order Code:** CAB054
**White 100m Order Code:** CAB040

## Antihum RG59+4




**Black 150m Order Code:** CAB060

## 3pc BNC Crimps

Use with the BNC Crimp Tool ▸▸▸

These traditional 3-piece BNC crimp-on plugs are the popular choice for CCTV Installers.

**100pk:** CON430
**100pk Individually Wrapped:** CON450

## Interceptor CCTV Housing Kit

**Order Code:** CCT470

Attractive housing, dual voltage, low current heater, strong cable managed bracket, accessories and fixings tub, 3x A4 CCTV warning signs with free registration onto the Who Is Watching Me data compliance scheme.

## BNC Ratchet Crimp

Crimps - 2pc✓ 3pc✓ Mini 3pc✓

SEE ONLINE TIP No: 248

Order Code: TOO980

Learn how to crimp a BNC! See online tip 248

## CCTV Test Monitor

cctvmate.com

- PTZ Control Testing
- DC/AC Voltage Tester
- RS485 Data Test Function
- 29 Protocols Supported
- Check Video Signal Strength
- 12V Camera Power Function
- Up to 10 Hours Battery Life
- Network Cable Testing
- Monitor Output Testing

**Kit includes:**

Carry case, DC/AC Voltage probes, RS485 Data test cable, Camera power cable, BNC Lead, Neck strap, Network cable tester & PSU.

Order Code: LCD330

## 12V DC 10-Amp PSU With 18 Outputs


Regulated 12V DC 10 Amp 1.5U rack mount power supply with 18 outputs. Each output supplies up to 1.1A with a maximum output of 10A across all ports.

**Order Code:** POW560

## 24V AC 10-Amp PSU With 18 Outputs


A 24V AC 10 Amp 1.5U rack mount power supply with 18 outputs. Each output supplies up to 1.1A with a maximum output of 10A across all ports.

**Order Code:** POW565

## 12V DC 20-Amp PSU With 18 Outputs


Regulated 12V DC 20 Amp 1.5U rack mount power supply with 18 outputs. Each output supplies up to 2A with a maximum output of 20A across all ports.

**Order Code:** POW562

## 24V AC 20-Amp PSU With 18 Outputs


A 24V AC 20 Amp 1.5U rack mount power supply with 18 outputs. Each output supplies up to 2A with a maximum output of 20A across all ports.

**Order Code:** POW566

# NiteDevil CCTV - Cameras That See In The Dark!

## You can find everything you need and more at nitedevil.com


As well as information and spec on all our cameras, we offer a wide range of support to help you get the most out of your NiteDevil equipment.

- Live Chat
- Tips
- FAQs
- Manuals
- Marketing Resources
- Tools
- How To Guides
- Software Downloads
- Videos
- Training Courses
- Trade Enquiries

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WEE/CG0783SS

This symbol on the products and/or accompanying documents means that used electronic equipment must not be mixed with general household waste. For treatment, recovery and recycling please return this unit to your trade supplier or local designated collection point as defined by your local council.



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